albumin was found, having been previously absent; in 1 case the amount of albumin in the urine was markedly increased and in 3 cases a definite increase in eye-ground changes was noted following the meat diet. Neither restricted nor forced protein-feeding had any influence on the blood-pressure in any of these cases. A case of recently active nephritis showed similar results after high protein diet, except that the red blood corpuscles which made their appearance in the urine failed to disappear promptly, as in the first 4 cases, on return to normal diet, but persisted for at least five months. Two cases undergoing this test were found to have kidney impairment which had not previously been suspected. Forced meat-feeding for two successive meals was invariably sufficient to cause the appearance of red blood corpuscles in the urine of 5 normal young men. The authors reach the conclusion that high protein diet in man is a renal irritant.

An Atypical Bacillus Paratyphosus B Infection.—MORGAN (*Bull. Johns Hopkins Hosp.*, 1921, xxxii, 195) reports a case of cystopyelitis following urethral stricture and urethrotomy, and a detailed account of the cultural and biological characteristics of the causative organism is given. The author reviews the literature and points out that, especially during the World War, there have been many reports of similar organisms which fall, in the classification of Bainbridge between B. paratyphosus B and B. enteritides (Gärtner). These organisms have been variously called "B. paratyphosus C," "Inagglutinable B. paratyphosus B," "Paracolon bac.," etc.; but the author agrees with Schultze that they should be considered as a variant of the B. paratyphosus B originally described by Schottmüller (who also first described the clinical picture of pyelitis caused by this organism), when, as in the case described, the organism shows only slight or moderate serological differences from the accepted B. paratyphosus B.

PEDIATRICS

UNDER THE CHARGE OF

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The Food Requirements of Children. I. Total Caloric Requirements.—HOLT and FALES (*Am. Jour. Dis. Children*, January, 1921) say that in calculating the total caloric requirements of children, there must be considered separately the component parts of which the total is made up. These are the requirements for basal metabolism, for growth, for muscular activity, and the food values lost in the excreta. The basal requirements which have been determined by Benedict and Talbot are highest per kilo at about the ninth month, and steadily fall from this time up to adult life. The food value lost in the excreta normally is a nearly uniform proportion of the intake, about 10 per cent for all ages after infancy. The requirements for growth are greatest during the period when the growth is most active during the first year of life and during adolescence. They are nearly uniform from the fourth to the tenth or eleventh years. The average for three factors—basal, growth requirements and food values lost in excreta—are nearly uniform for children of the same weight living under the same or similar conditions. The requirement for activity is the only factor which varies widely with different individuals. The great difference in the calculations of different writers, who have estimated theoretical values for total calories per kilo for children, are in part due to the fact that they have not sufficiently considered the different component parts which make up the total. The average caloric requirement of children according to the observations reported in this paper is about 100 calories per kilo at an age of one year or about 9.5 kilos. For boys it falls to about 80 calories at six years or about 20 kilos, and remains practically constant at this value up to the age of fifteen years, the increasing requirements for activity being met by the reduction in the basal requirements per kilo. After an age of about fifteen years or about 50 kilos is reached, the calories per kilo can rapidly be reduced to adult standards of about 48 calories per kilo. The requirements for girls falls to 76 calories per kilo at six years or about 20 kilos, continues at this value until the tenth year, when it rises because the basal requirement is nearly constant while there is an increase in needs for growth and activity. The requirement remains at 80 calories per kilo until growth is complete, and it then falls rapidly to adult standards of about 44 calories per kilo. In these calculations a much higher value for calories per kilo during adolescence has been allowed than that given by others. This seems to be absolutely essential, because of the increased growth needs at this time and the large requirement for muscular activity. According to their allowance the total daily caloric requirement of children of both sexes during adolescence exceeds by nearly 1000 calories the requirements of the adult man or woman of moderate activity. Children who are under weight require more calories per kilo than those who are of average weight for their age. Children who are overweight require fewer calories per kilo than those of average weight.

Calcium in the Blood of Children.—Denis and Talbot (*Am. Jour. Dis. Children*, January, 1921) have modified Lyman's method. They employ citrated plasma (0.1 gm. of solid sodium citrate to 100 cc of blood), and they use a variety of standards for the final nephelometric reading. These standards are made up to contain 0.2, 0.15 and 0.1 mg. respectively of calcium. In 119 samples of blood from patients in the children's ward, irrespective of diagnosis, the maximum figure was 13.5 and the minimum 1 mg. per 100 cc of blood plasma. In 22 normal adults the maximum was 12.1 and the minimum was 7.2 mg. and the average was 10 mg. of calcium per 100 cc of plasma. In 28 cases of rickets, 7 in the acute and 21 in the convalescent stage, some gave calcium values distinctly below the normal, but as some of these were suffering other illnesses such as pneumonia, no definite conclusions could be drawn. In tetany the calcium content of the serum was extremely low. The administration of calcium chloride, 25 grains three times a day, in 2 cases gave a marked increase in the blood cal-